Cisco Unified Videoconferencing 3515 MCU 5.6

A Flexible Video Communications Infrastructure Solution for Cisco® Unified Communications

Cisco Unified Communications Solutions enable collaboration so that organizations can quickly adapt to market changes while increasing productivity, improving competitive advantage through speed and innovation, and delivering a rich-media experience across any workspace, securely and with optimal quality.

The Cisco Unified Videoconferencing System — an integral component of the Cisco Unified Communications System — allows face-to-face discussions among remote participants. The solution supports multiple protocols to facilitate connectivity with a wide variety of video-enabled devices from desktop video telephony to standard-definition (SD) and high-definition (HD) room systems and Cisco TelePresence™ Systems.

Cost-Effective Video Conferencing Solution

The Cisco Unified Videoconferencing 3515 MCU is a flexible, high-performance solution for organizations of any size that want to deploy multilocation, HD video conferencing. Each system is self-contained and can support up to 48 simultaneous video endpoints in one or more conferences. These multipoint control units (MCUs) also work with the higher-capacity Cisco Unified Videoconferencing 3545 System; they are designed for deployment at remote network sites in multiple-MCU distributed environments, facilitating optimization of WAN bandwidth use for geographically dispersed organizations.

The solution helps organizations promote effective communication and collaboration by allowing people to meet at any time from anywhere without the expense and inefficiencies of traveling. Educational institutions and organizations can conduct efficient training and education programs that extend beyond the campus environment. Doctors can consult specialists from any part of the world to provide the best care for their patients. Organizations can build trust and stronger relationships with remote staff and customers through more frequent face-to-face communications while lowering expenses and enabling carbon-reduction initiatives through travel reduction.

Key Features and Benefits

The Cisco Unified Videoconferencing 3515 MCU offers important features and benefits for video conference users — and for your organization.

Multiprotocol Support: Broad Video Interoperability

Cisco Unified Videoconferencing Systems support multiple video and audio compression standards, codecs, and protocols, including H.323, Session Initiation Protocol (SIP), Skinny Client Control Protocol (SCCP), and H.320, to help ensure broad connectivity with traditional and emerging video environments. This degree of support provides flexibility that allows Cisco Unified Videoconferencing solutions to interoperate with traditional room and desktop video conferencing systems, newer HD video solutions, Cisco TelePresence solutions, Cisco Unified Communications Manager video telephony environments, and unified communications clients, including Cisco

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Unified Personal Communicator, Microsoft Office Communicator, and Lotus Sametime. Providing a single video infrastructure solution for a broad range of devices and access methods helps simplify the user experience and system management, facilitating effective video communications and a lower total cost of ownership (TCO).

High-Performance, Flexible Solution: Optimized Experience for All

The Cisco Unified Videoconferencing 3515 MCU uses a powerful hardware design with flexible processing capabilities to provide an exceptional user experience that is also scalable and cost-effective. The products are specifically designed to meet the needs of today's heterogeneous video environments by maintaining HD quality for HD endpoints while simultaneously providing highly scalable SD and desktop video conferencing.

- HD conferencing: Connections to HD-capable endpoints are fully processed, delivering full-screen voice-activated switching in HD, full interoperability with SD endpoints in the same conference, and continuous-presence features displayed at full HD quality. The HD services run simultaneously on the MCU with both the high-quality and high-capacity SD video services, automatically providing the optimal experience and capacity for the entire spectrum of video users and deployments.
- High-quality SD video conferencing: Every port has dedicated encoders, and the system automatically implements transcoding and connection-speed transrating so endpoints can connect to any conference, at any supported bit rate, with any supported audio or video codec, at any supported resolution, and with any screen layout. This approach helps ensure an optimal experience for each participant. The encoder-per-port hardware architecture also significantly reduces planning, provisioning, and scheduling requirements by eliminating the need to define or limit the bit rates, video formats, and conference features.
- High-capacity SD video conferencing: The Cisco Unified Videoconferencing 3515 MCU has the flexibility to redistribute processing resources. If available bandwidth is not fully used, the number of available ports automatically increases, making the solution highly cost-effective for desktop video and video telephony deployments.

Extensive Features that Provide Meeting Control and Flexible Video Presentation

The Cisco Unified Videoconferencing 3515 MCU offers two modes of video display: voice-activated video selection and continuous presence. The H.239 standard is also fully supported, allowing conference participants to share content in real time. The solution provides extensive conference-management functions. Users and conference moderators can control the meeting from a web-based user interface, a dual tone multifrequency (DTMF) interface from video endpoints or standard phones, or video endpoint remote controls. For example, the conference moderator can lock the conference as well as add, mute, or disconnect participants. Having access to these integrated controls improves meeting effectiveness, particularly in large video conferences or educational environments.

Integrated Unified Communications and Rich-Media Conferencing Solution

The Cisco Unified Videoconferencing 3515 MCU is integrated with the Cisco Unified Communications System to enable multiple video environments and usage scenarios, including impromptu conferences that you can initiate from desktop communications clients and phones; collaborative conferences that integrate voice, video, and web conferencing; and traditional multilocation video conferencing. You can easily transition across and between applications, such

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as presence, instant messaging (IM), IP telephony, unified messaging, and rich-media conferencing as interactions warrant, independent of where they are or what device they are using. Unified communications interoperability also delivers investment protection by helping ensure that your organization can fully use your investment in video conferencing systems. The Cisco Unified Videoconferencing 3515 MCU supports the following deployment modes, which can be used separately or together.

- Traditional IP videoconferencing: The solution provides flexible, scalable, and high-performance multiparty video conferencing for both SD and HD traditional room-based video conferencing systems across a wide variety of endpoints, including H.320, H.323, SCCP, and SIP devices. Cisco Unified Videoconferencing 5.6 adds IP dialing with interactive voice response (IVR) to simplify meeting access. Endpoints can directly dial into the system and you can choose your meetings from the on-screen menu.
- Cisco TelePresence interoperability: When used in conjunction with the Cisco TelePresence Multipoint Switch, the Cisco Unified Videoconferencing 3515 MCU provides the bridge between traditional video conferencing endpoints and Cisco TelePresence endpoints, allowing your business to protect and take full advantage of your investments.
- Rich-media conferencing: The Cisco Unified Videoconferencing 3515 MCU, when combined with the Cisco Unified MeetingPlace® Video Integration option, delivers the video conferencing capabilities for Cisco Unified MeetingPlace Conferencing Version 6.0 and earlier. The solution integrates enterprise-class voice, video, and web conferencing with industry-leading video setup and control capabilities that make setting up, attending, and managing meetings easy. Note: Cisco Unified MeetingPlace 7.0 and later unify voice and video conferencing in a single media server appliance. Cisco Unified Videoconferencing complements Cisco Unified MeetingPlace 7.0 by providing HD conferencing and Cisco TelePresence interoperability.
- Cisco video telephony: Cisco Unified Communication Manager video telephony dramatically simplifies your video experience by making video communications as easy as placing a telephone call (Figure 1). The Cisco Unified Videoconferencing 3515 MCU provides multiparty conferencing support for video telephony environments. The solution makes initiating or adding a user to a conference as easy as pressing the conference control on a Cisco Unified IP Phone or video telephony application, such as Cisco Unified Personal Communicator.

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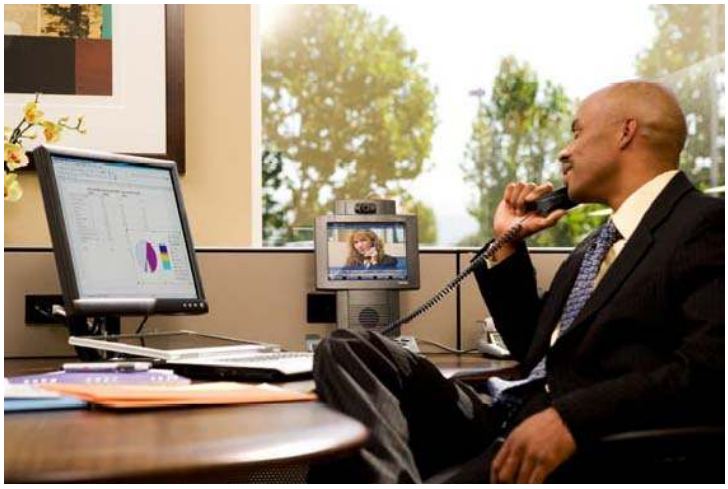
Figure 1. Cisco Video Telephony: Video Calls Are as Easy to Place as Telephone Calls



- When deployed with the Cisco Unified Videoconferencing Manager application, Cisco Unified Videoconferencing enhances the collaboration capabilities of Microsoft Office Communicator and Lotus Sametime by adding support for standards-based, multiparticipant video. Microsoft Office Communicator and Lotus Sametime users can initiate impromptu video communications with other Microsoft Office Communicator and Lotus Sametime users and with any video solution that can connect to Cisco Unified Videoconferencing, including Cisco TelePresence Systems.

Scalable Solution that Uses an Intelligent Network

Each Cisco Unified Videoconferencing 3515 MCU is a self-contained, preconfigured, high-performance appliance that provides audio and video processing for small to medium-sized conferences. You can deploy the solution with the Cisco Unified Videoconferencing 3522 and Unified Videoconferencing 3527 Gateway appliances, which allow ISDN H.320 endpoints to participate in the same conferences as IP-based H.323, SCCP, or SIP endpoints, providing investment protection for existing video conferencing deployments. Readily deployable at remote network sites, the Cisco Unified Videoconferencing 3515 MCUs also work with the Cisco Unified Videoconferencing 3545 Systems at larger sites to provide a distributed video environment that optimizes WAN bandwidth usage for geographically dispersed organizations while preserving solution performance and quality of the user experience.

Video conferencing deployments with the Cisco Unified Videoconferencing 3515 MCU require the presence of an H.323 gatekeeper in the video network to provide functions such as telephone number-to-IP address resolution and zone bandwidth management for video conferencing endpoints. Based on Cisco IOS® Software, the Cisco IOS Gatekeeper product runs on a wide variety of Cisco integrated services routers. The Cisco Unified Border Element, also a Cisco IOS Software product, can enhance a video conferencing deployment by providing session-border-control services, quality-of-service (QoS) functions, and enhanced security with firewall traversal capabilities, all of which allow you to extend your video conferencing capabilities beyond your network to partner and customer networks, or even to video endpoints using the public Internet.

Advanced Solution Management, Desktop Video, and Streaming: Cisco Unified Videoconferencing Manager

Cisco Unified Videoconferencing Systems can be managed as standalone devices or with the Cisco Unified Videoconferencing Manager, which helps organizations of all sizes use their video

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conferencing resources more effectively and extend desktop video access to new classes of users. The Cisco Unified Videoconferencing Manager allows you to easily schedule video conferences from a web browser or a Microsoft Outlook or Lotus Notes calendar, where you can view, check availability, and reserve video resources, such as Cisco Unified Videoconferencing MCU devices and gateways. Additional features such as custom meeting templates that identify bandwidth, layout, and terminal setting preferences; Lightweight Directory Access Protocol (LDAP) integration; email notifications; and automatic dial-out to video terminals help make the scheduling and attending experience flexible and efficient, thereby reducing the need for support and the TCO. You can also record and play back video conferences.

Cisco Unified Videoconferencing Manager reduces the hurdles to deploying video conferencing to large or geographically dispersed environments. Video conferencing devices are registered with Cisco Unified Videoconferencing Manager, which then combines the device information, network topology, and bandwidth information to help simplify user and administrator interactions and make intelligent resource-allocation decisions. Cisco Unified Videoconferencing Manager also helps improve meeting effectiveness by providing powerful in-meeting controls, such as the ability to invite new users, mute participants, and change the meeting video layout for any conference from a single, centralized web user interface.

The Cisco Unified Videoconferencing Manager also includes desktop video capabilities, including fully interactive video, one-way video streaming, and interoperability with Microsoft Office Communicator and Lotus Sametime. Anyone with a PC, web browser, and webcam can join a video conference as a fully interactive video participant, whether the person is inside or outside the corporate firewall. The streaming video features allow anyone with a web browser to passively view a live video stream of a conference, which is perfectly suited for meetings such as panel discussions where there is a large audience but only a subset of the attendees actively participates. Eliminating the need to be connected to the enterprise network or have access to traditional video endpoints makes it easier for traveling or remote employees, partners, and customers to participate and realize the benefits of visual communications. Microsoft Office Communicator and Lotus Sametime interoperability provides interoperability with standards-based video solutions and lets you initiate multiparticipant video directly from a buddy list or an instant message.

Product Information

Table 1 describes the features of the Cisco Unified Videoconferencing 3515 MCU, and Table 2 lists the product specifications.

Table 1. Cisco Unified Videoconferencing 3515 MCU Features and Benefits

Feature	Description		
		Cisco Unified Videoconferencing 3515 MCU 12	**Cisco Unified Videoconferencing 3515 MCU 24**
Part number		IPVC-3515-MCU12	IPVC-3515-MCU24
Video and audio capacities	High-capacity SD connections (384 kbps or lower)	72 audio 24 video	72 audio 48 video
	High-quality SD connections (up to 2 Mbps)	24 audio 12 video	48 audio 24 video
	Switched HD (up to 2 Mbps)	24 audio 12 video	48 audio 24 video

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	HD (up to 2 Mbps)	24 audio 4 video *	48 audio 16 video*
	• All SD video ports are fully processed for audio and video, allowing them to offer any supported connection speed, any supported video and audio codecs, and any supported SD video resolutions (QCIF, CIF, SIF, or 4CIF resolutions) without any decrease in port capacities or in the number of simultaneous conferences supported. • There is no limit to the number of simultaneous conferences. • Switched HD service provides full-screen voice-activated switching for HD-only (720p and 1080p) conferences. • HD service provides interoperability between SD and HD (720p) participants and continuous presence conference views in HD (720p). The video-connection capacities listed for the HD service can be either SD or HD connections. HD participants receive 720p video resolution using H.264. • All services may run concurrently on the MCU to optimize the widest variety of endpoint requirements. • All audio connections are fully processed and support audio-only connections from IP phones, including all Cisco Unified IP Phones and clients. *Enabling the HD service reduces capacity for all services on the MCU, but the high-capacity SD service (384 kbps or less) continues to support two connections per port.		
New in Cisco Unified Videoconferencing 5.6 →	• Video recording and content management with Cisco Unified Video Conferencing Manager • IP dialing with IVR and on-screen menu for ease-of-use • Multiparty video for Microsoft Office Communicator and Lotus Sametime with Cisco Unified Video Conferencing Manager • Lotus Notes scheduling with Cisco Unified Video Conferencing Manager		
Scalability	• You can create larger conferences by cascading multiple Cisco Unified Videoconferencing 3515 MCU and Unified Videoconferencing 3545 MCU modules together. • You can centralize cascaded conferences in the data center or distribute conferences geographically to more efficiently use WAN bandwidth. • For desktop, telephony, or mobile video conferencing deployments that do not require more then 384-kbps connections, Cisco Unified Videoconferencing 3515 MCU port capacity is increased by 100 percent. • Auto-cascading, geographical MCU selection, and other “virtual MCU” features are provided by both the Cisco Unified MeetingPlace and Cisco Unified Videoconferencing Manager products.		
Audio transcoding	• Conference participants can use G.711, G.722, G.722.1, G.723.1, G.728, or G.729A audio encoding. • The audio capabilities of each calling endpoint are matched before the audio from all participants is mixed.		
Conference management	• A conference moderator can perform a variety of conference monitoring and management functions through an easy-to-use web interface. • Real-time conference management and monitoring features allow moderators to: ◦ View conference list and number of participants ◦ View conference type and participant information, including name, number, IP address, video and audio codecs in use, and time joined the conference ◦ Create a new conference and assign a conference password ◦ Terminate a video conference • The solution offers powerful conference control for management of active conferences, allowing moderators to: ◦ Add or drop participants in a conference ◦ Lock the video on a location to be viewed by all participants in a conference ◦ Lock the video and specify image position during a continuous-presence conference ◦ Switch between voice-activated and continuous-presence views during a conference ◦ Mute audio from a selected participant ◦ Terminate a video conference		
Unscheduled or scheduled conferences	• You can easily initiate unscheduled conferences. • You can schedule conferences through the Cisco Unified MeetingPlace solution or the Cisco Unified Videoconferencing Manager product.		

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Security	• H.235 Advanced Encryption Standard (AES) and Data Encryption Standard (DES) encryption on both SD and HD connections, up to 128-bit keys, offers secure audiovisual conferencing. [3] • Your access is password-protected through a web GUI with multiple levels: administrator, operator, and user. • The solution offers secure password enforcement. • The solution offers HTTPS and Secure Sockets Layer (SSL) protection. • PIN-protected conferences help ensure privacy. • The solution offers a security warning page option. • You can disable or enable the serial port. • The solution offers session inactivity time-out and user lockout (manual and auto) capabilities. • Security event logging is provided.
Conferencing and video display features	• You can conduct an unlimited number of simultaneous conferences. • Full-screen voice-activated HD switching service delivers the same port capacity as SD services while making good use of higher-resolution images. • Continuous-presence conferences display up to 16 SD or HD participants at one time. • You have more than 26 screen layout options, all of which support both SD and HD participants. • Auto layout selection is based on the number of participants. • Continuous-presence screen layouts are displayed in full 720p resolution to HD participants. • The solution offers configurable methods to convert 4:3 SD aspect ratio to 16:9 HD aspect ratio video resolutions (crop, stretch, or borders). • The administrator controls layouts and conference views. • The web interface gives a conference moderator full control of participant location in the screen layout. • A self-see window in the screen layout can be removed for (high-capacity and high-quality) SD conferences, providing a unique and optimized view for each SD participant (without the participant in the layout). • The solution offers text overlay options.
Audio announcements on entry and exit	• The system plays entry and exit sounds when conference participants join or leave a conference. • You can record and upload custom messages using the supplied recording utility software.
Data support	• The solution supports H.239 and Tandberg DuoVideo for presentation sharing. • The solution integrates with the Cisco Unified MeetingPlace solution for rich-media conferencing and web collaboration.
Diagnostics	• The solution performs a power-on self-test for CPU, interfaces, and memory when the unit is turned on. • The solution provides front-panel error indicators. • The solution provides Telnet and serial port-monitoring capabilities.

Table 2. Cisco Unified Videoconferencing 3515 MCU Specifications

Feature	Specification
LAN interface	One 10/100 Ethernet port, IEEE 802.3, 8-pin RJ-45
Serial port	EIA-232, 9-pin D-type
Video protocols	H.323, SIP, and SCCP
Video coding	H.261, H.263, and H.264
Video resolutions	Primary participant video resolutions: Quarter Common Intermediate Format (QCIF), Common Intermediate Format (CIF), 4CIF, and 1280 x 720 HD H.239 and Tandberg DuoVideo content video resolutions: Video Graphics Array (VGA), Super Video Graphics Array (SVGA), and Extended Graphics Array (XGA)
Audio coding	G.711, G.722, G.722.1, G.723.1, G.728, and G.729A
Other protocols	H.239, H.243, and H.235 (AES and DES)
Data collaboration	• H.239 and Tandberg DuoVideo for presentation sharing • Integration with the Cisco Unified MeetingPlace solution for audio, video, and web rich-media conferencing and collaboration
Gatekeeper support	Cisco IOS Gatekeeper or equivalent
Dimensions	1.75 x 17.25 x 10.0 in. (4.445 x 43.815 x 25.4 cm)

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Weight	15.43 lb (7 kg)
Power	• IPVC-3515-MCU12: 67W maximum • IPVC-3515-MCU24: 88W maximum • 100–240 VAC autosense, 50–60 Hz • U.S. power cable included • Other power cables available
Environment	• Operating temperature: 32 to104℉ (0 to 40℃) • Storage temperature: 13 to 158℉ (25 to 70℃) • Humidity: 5 to 90% noncondensing
Agency compliance	Safety: • UL 60950: 2000 • CSA CS22.2 No. 60950-00 • GS Approval (EN 60950: 2000) • EN 60950: 2000 • ACA: TS002-1997 • AS/NZS 3260: 1993, A4: 1997 • AS/NZS 60950: 2000 • IEC 60950: 1999 (CB test report) EMI: • FCC Part 15 Subpart B, Class A, • EN 55022: 1998, Class A • ICES 003 • EN 55024: 1998 • EN 61000-3-2: 1995, Amendment A14: 2000 • EN 61000-3-3 • EN 61000-4-2: 1995 • EN 61000-4-3: 1995 • EN 61000-4-4: 1995 • EN 61000-4-5: 1995 • EN 61000-4-6: 1996 • EN 61000-4-8: 1993 • EN 61000-4-11: 1994 • AS/NZS 3548: 1995 Class A, Amendment 1: 1997, Amendment 2: 1997 • VCCI: 1999

Cisco Unified Communications Services

Cisco and our certified partners can help you deploy a secure, resilient Cisco Unified Communications Solution, meeting aggressive deployment schedules and accelerating business advantage. The Cisco portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks.

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